

Input Pages, Media Sheets, Impressions and Output Pages With Cut and Roll Media

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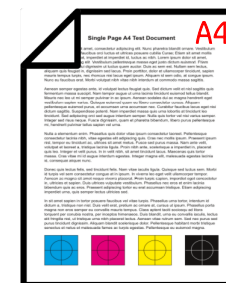
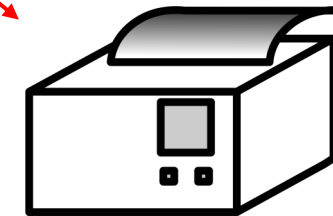
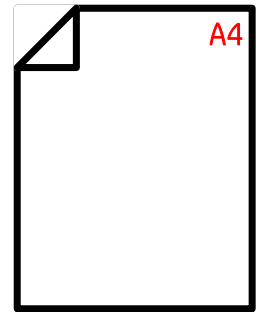
Terminology

- **Input Page:** A page according to the definition of "pages" in the language used to express the Document data.
 - Document format may specify separate pages; if so, each page has dimensions corresponding to a media size
- **Media Sheet:** A single instance of a medium, whether printing on one or both sides of the medium. Media Sheets also include sections of roll media.
- **Impression:** The content imposed upon one side of a Media Sheet by a marking engine, independent of the number of times that the sheet side passes any marker. An Impression contains one or more Input Pages that are imposed (scaled, translated, and/or rotated) during processing of the Document data [Input Pages].
- **Output Page:** The product created by the Printer from making the Impressions of the Input Pages onto a Media Sheet. (Not currently a defined PWG / IPP term)

Input Pages



Media Sheets



Output

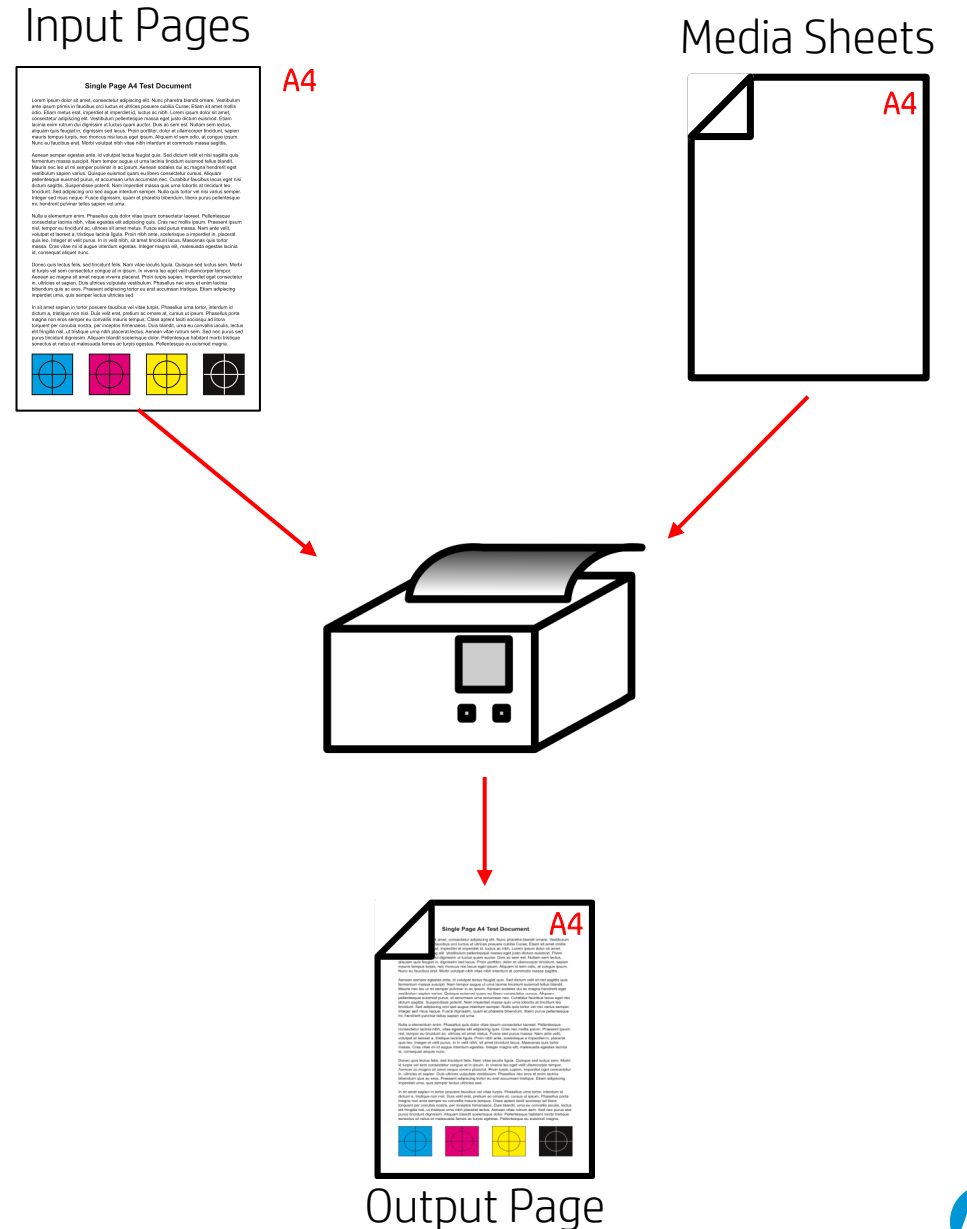
Producing Output from Input Pages, Media Sheets and Impressions

Simple Scenario: Input Pages and Media Sheets Are Same Size

- Impressions of Input Pages are rendered onto Media Sheets
- Straightforward – no transformations

Media Sheets Same Size As Input Pages

- Input Page Size: A4
- Media Sheet Size: A4
- Intent: Print document with Input Pages on Media Sheets with same size
- IPP:
 - "media" = 'iso-a4'
- Output: A4



When Input Pages and Media Sheets Have Differing Sizes

Scenarios and Desired Outcomes

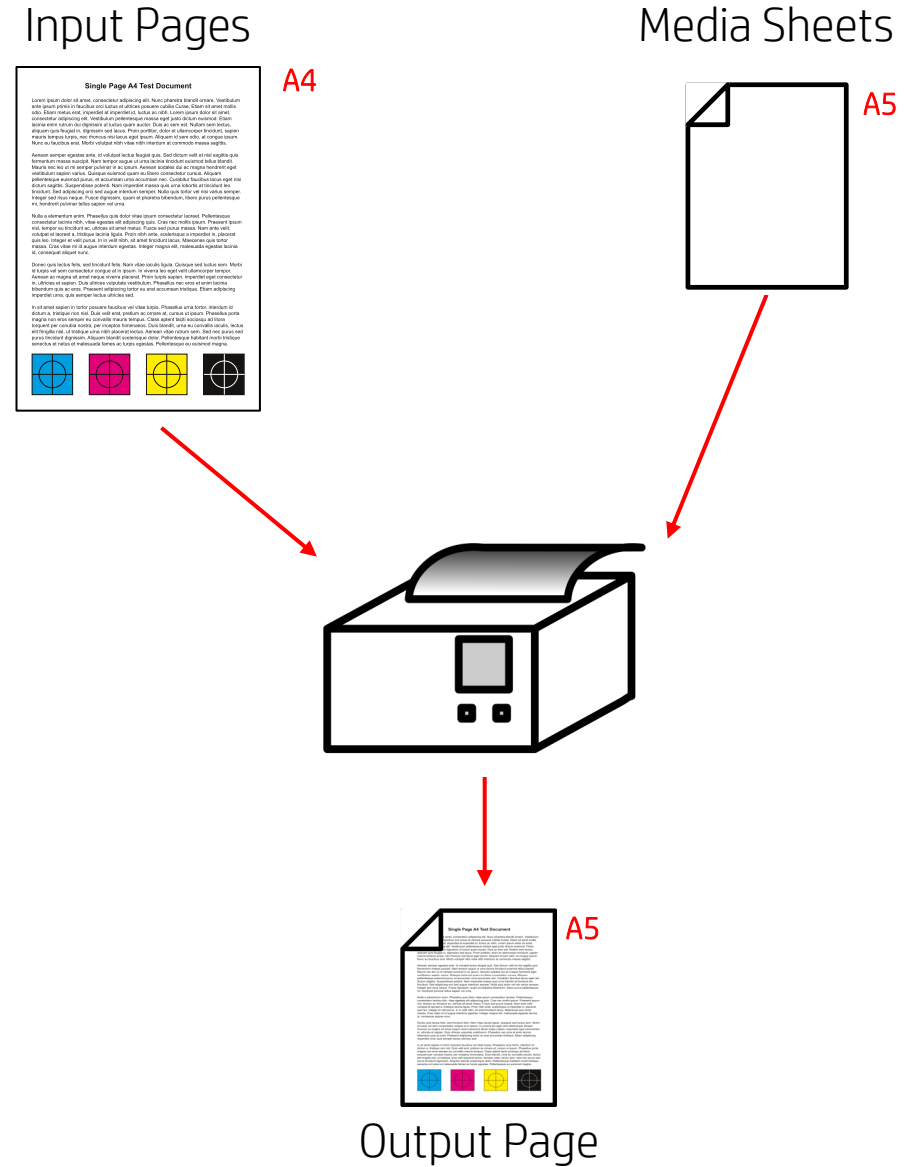
Scenario	Input Pages	Media Sheets	Physical Media	Desired Result
Input Pages Same Size As Media Sheets	A4	A4	A4	A4
Input Pages Larger Than Media Sheets	A4	A5	A5	Fit to A5? Crop A4 to Page?
Input Pages Smaller Than Media Sheets	A4	A3	A3	Fit to A3? Place* A4 on A3?
Input Pages Smaller Than Media Sheets With Media Sheet Rotation	A4	A2	A2	Rotate and fit to A2? Rotate and place* A4 on A2?

* Placement assumed to be "centered" but no other choices via IPP currently



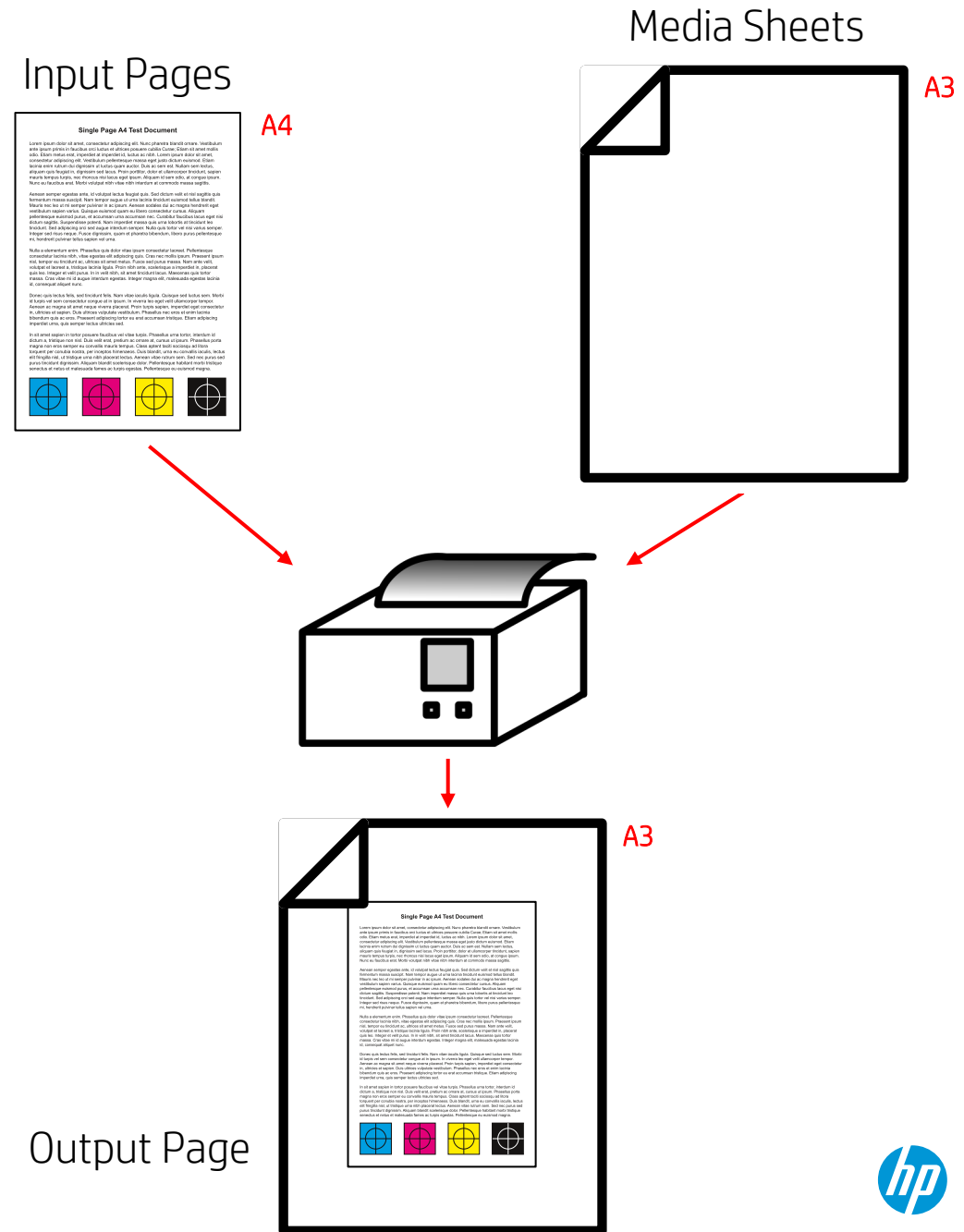
Input Pages Larger Than Media Sheets

- Input Page Size: A4
- Media Sheet Size: A5
- Intent: Print A4 pages onto smaller Media Sheets without Client resizing the Input Pages
- IPP:
 - "media" = 'iso-a5'
 - "print-scaling" = 'auto' or 'fit'
- Output: A5



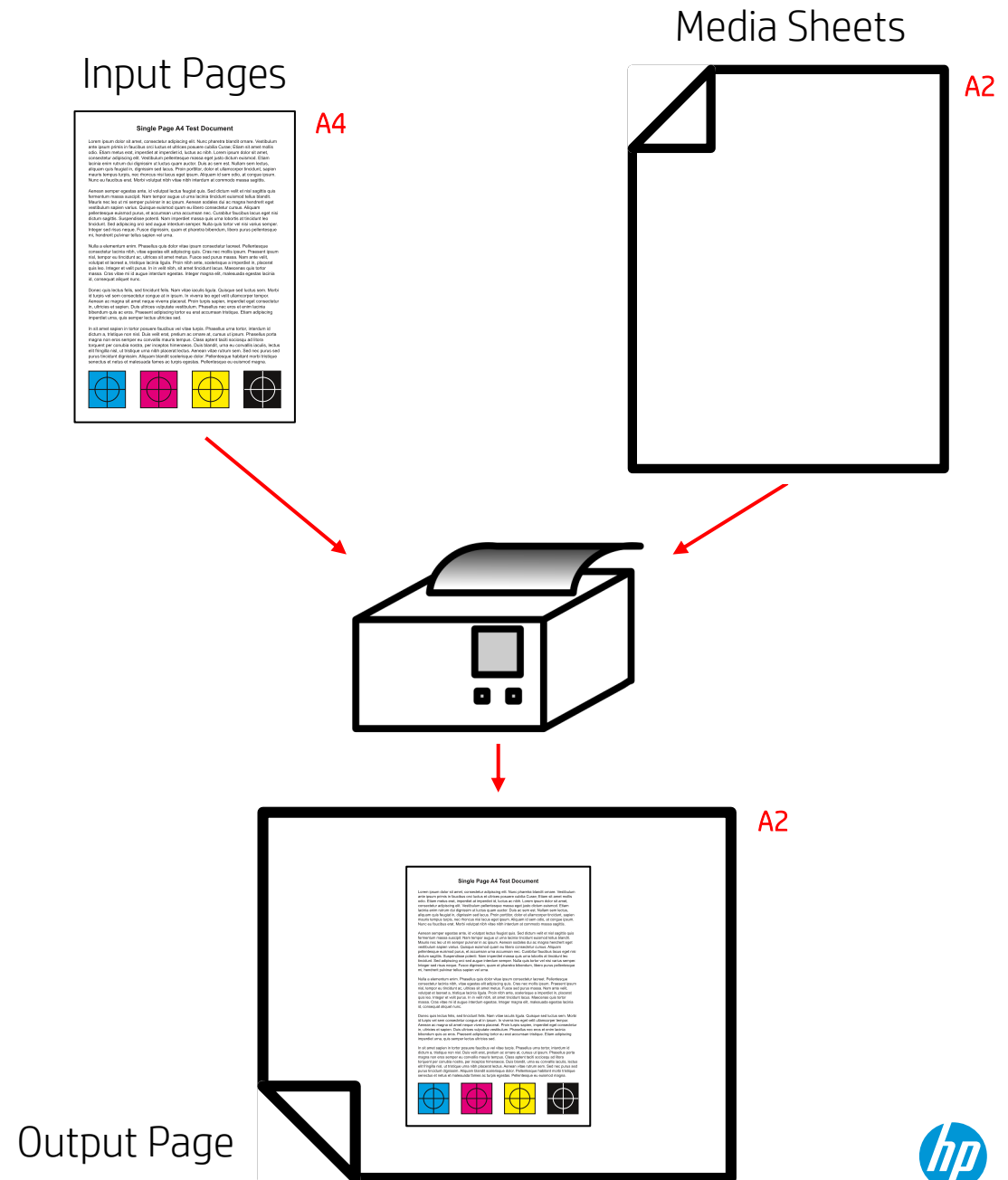
Input Pages Smaller Than Media Sheets

- Input Page Size: A4
- Media Sheet Size: A3
- Intent: Print A4 document onto larger Media Sheets without Client resizing the Input Pages
- IPP:
 - "media" = 'iso-a3'
 - "print-scaling" = 'auto' or 'fit' ***
 - "impressions-location" = 'center-middle'
- Output Page Size: A4 centered on A3



Input Pages Smaller Than Media Sheets With Media Sheet Rotation

- Input Page: A4
- Media Sheet: A3
- Intent: Print A4 document onto larger media sheets without reformatting the document (perhaps to produce A4 Output from larger media)
- IPP:
 - "media" = 'iso-a3'
 - "print-scaling" = 'auto' or 'fit'
 - "impressions-location" = 'center-middle'
 - "impressions-rotation" = 90
- Output: A4 (centered on A3)



New Attributes

- "impressions-location" (type2 keyword)
 - Specifies the location of the Impressions on the Media Sheets
 - Currently only one "choice": 'center'
 - Do we need this?

Media Sheets From Roll Media

When Media Sheet Size Doesn't Match Physical Media Size

Scenarios and Desired Outcomes

Scenario	Input Pages	Media Sheets	Physical Media	Desired Result
Input Pages Same Size As Media Sheets	A4	A4	A4	A4
Input Pages Larger Than Media Sheets	A4	A5	A5	Fit to A5? Crop A4 to Page?
Input Pages Smaller Than Media Sheets	A4	A3	A3	Fit to A3? Place* A4 on A3?
Input Pages Smaller Than Media Sheets With Media Sheet Rotation	A4	A2	A2	Rotate and fit to A2? Rotate and place* A4 on A2?

* Placement assumed to be "centered" but no other choices via IPP currently

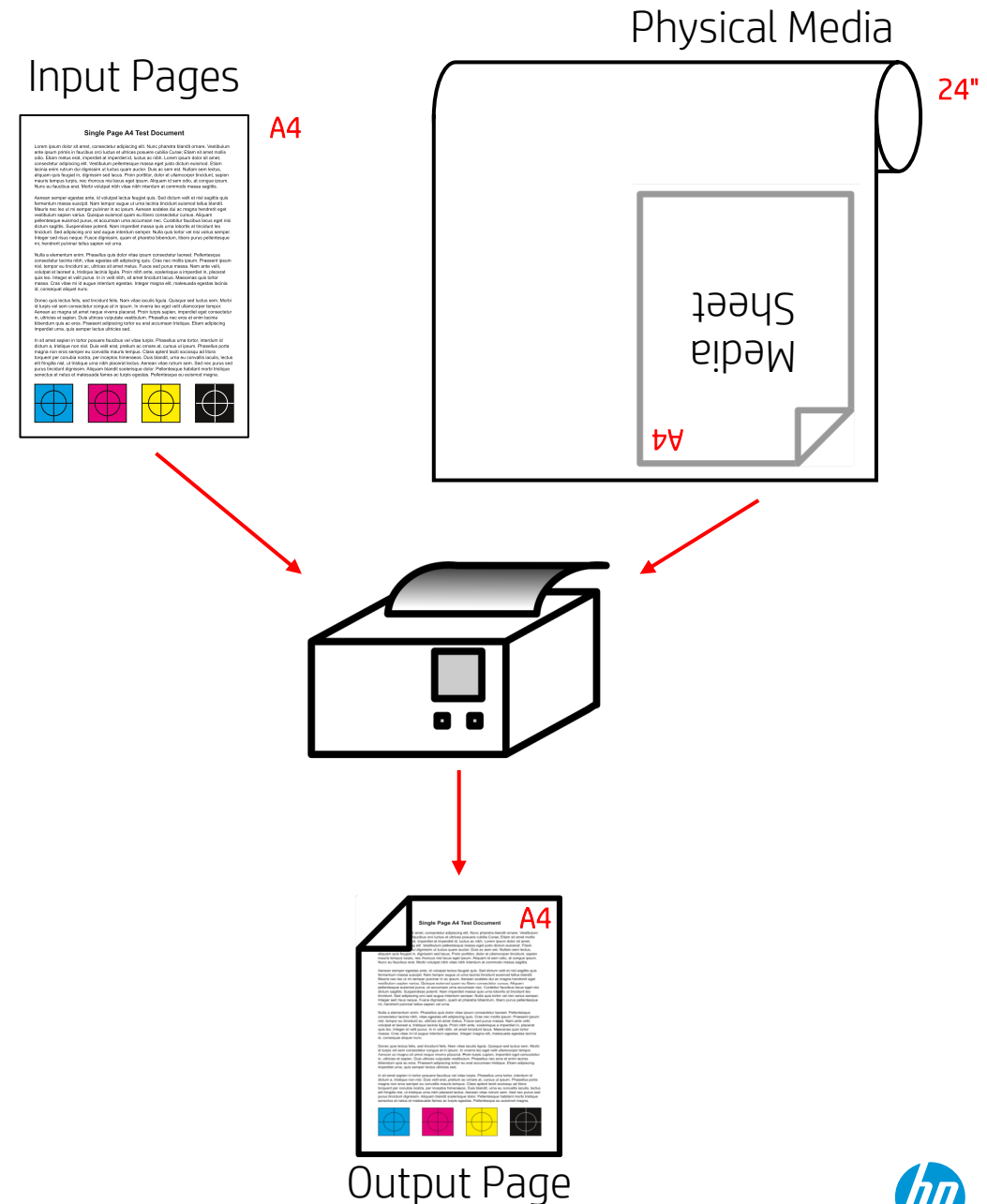
Scenarios and Desired Outcomes – With Roll Media

Scenario	Input Pages	Media Sheets	Physical Media	Desired Result
Input Pages Same Size As Media Sheets	A4	A4	A4	A4
Input Pages Larger Than Media Sheets	A4	A5	A5	Fit to A5? Crop A4 to Page?
Input Pages Smaller Than Media Sheets	A4	A3	A3	Fit to A3? Place* A4 on A3?
Input Pages Smaller Than Media Sheets With Media Sheet Rotation	A4	A2	A2	Rotate and fit to A2? Rotate and place* A4 on A2?
Input Pages Same Size As Media Sheets Produced From Roll Media	A4	A4	A1 Roll	A4
Input Pages Smaller Than Media Sheets Produced From Roll Media With 90° Orientation	A4	A3	A1 Roll	A4 fit to A3

* Placement assumed to be "centered" but no other choices via IPP currently

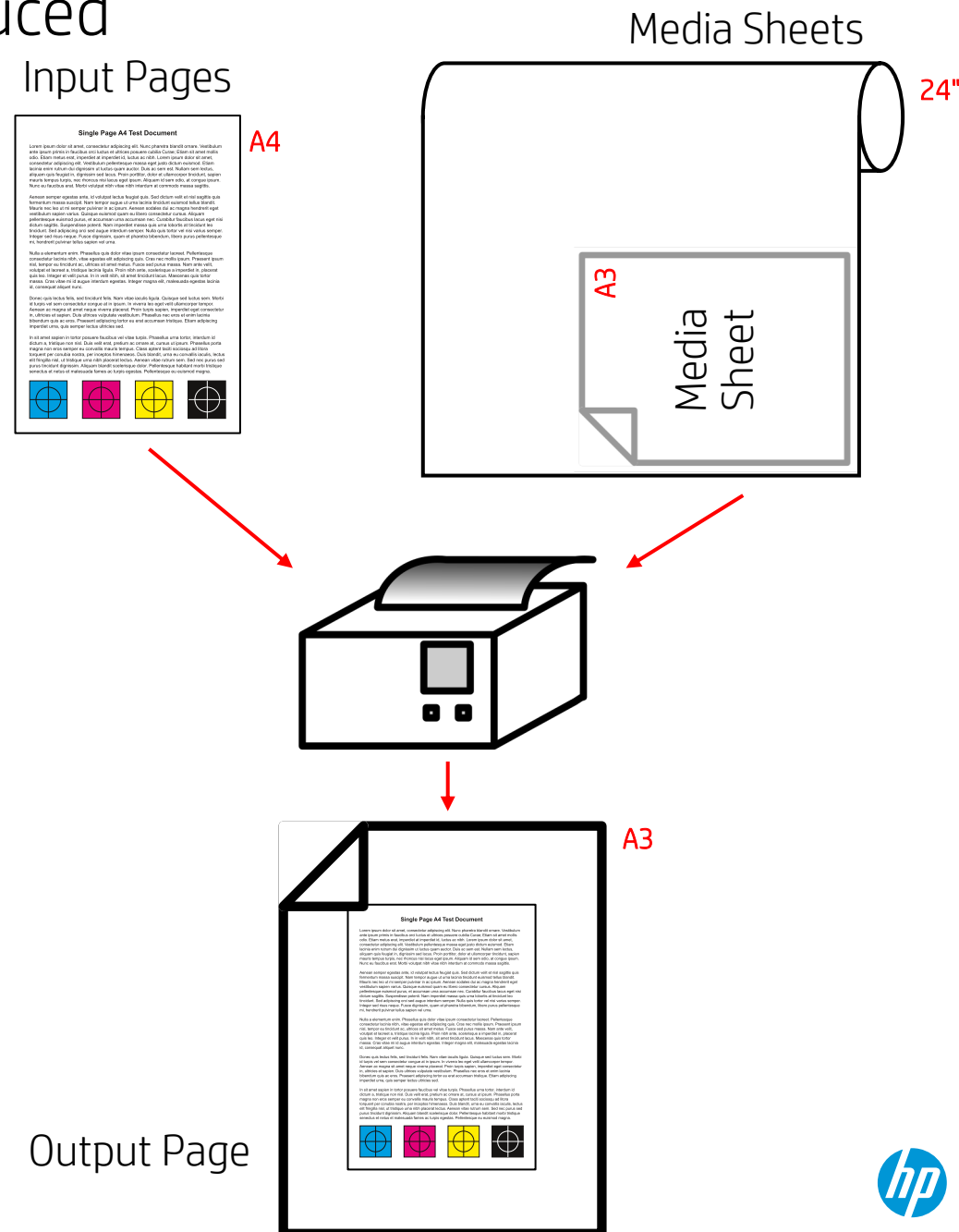
Input Pages Same Size As Media Sheets Produced From Roll Media

- Input Page Size: A4
- Media Sheet Size: A4
- Intent: Produce Media Sheets from Roll Media where Media Sheets and Input Pages have same size
- IPP:
 - "media" = 'iso-a4'
 - "roll-media-sheet-location" = 'right'
 - "roll-media-sheet-orientation" = 'portrait'
- Output: A4



Input Pages Smaller Than Media Sheets Produced From Roll Media With 90° Orientation

- Input Page: A4
- Media Sheet: A3
- Intent: Print A4 document onto larger media sheets without reformatting the document (perhaps to produce A4 Output from larger media)
- IPP:
 - "media" = 'iso-a3'
 - "print-scaling" = 'auto' or 'fit'
 - "roll-media-sheet-location" = 'right'
 - "roll-media-sheet-orientation" = 'reverse-landscape'
- Output: A4 centered on A3



New Attributes

- "roll-media-sheet-location"
 - Where horizontally on the Roll Media to produce the Media Sheet
- "roll-media-sheet-orientation"
 - What orientation the Media Sheet should have when it is produced from the Roll Media

OR...

- Extend "imposition-template" to include new keywords for this, like "right-portrait" or "center-reverse-landscape"